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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,802	02/10/2004	Yu-Ling Chang	24061.65 (TSMC2003-0230)	9688
42717	7590	05/26/2005	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202			MASINICK, MICHAEL D	
			ART UNIT	PAPER NUMBER
			2125	

DATE MAILED: 05/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/775,802	CHANG ET AL.
Examiner	Art Unit	
Michael D. Masinick	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 07 January 2005.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) 4-16, 19 and 20 is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-3, 17, 18 and 21 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 10 February 2004 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
    1.  Certified copies of the priority documents have been received.  
    2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
    3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-3, 17, 18, and 21, drawn to a method of choosing a tank based on mathematical calculations, classified in class 700, subclass 89.
  - II. Claims 4-16, 19, and 20, drawn to modification and storage of recipe data, classified in class 700, subclass 123.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as a way of identifying a tank to use and invention II has a separate utility as a storage and modification system for semiconductor recipes. See MPEP § 806.05(d).
3. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with David O'Dell on May 16th a provisional election was made with traverse to prosecute invention 1, claims 1-3, 17, 18, and 21. Affirmation of this election must be made by applicant in replying to this Office action. Claims 4-16, 19 and 20 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 101/112***

2) 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3) Claims 1-3, 17, 18, and 21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

(A) For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the “progress of science and the useful arts” (i.e., the physical sciences as opposed to social sciences, for example), and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the process must somehow apply, involve, use, or advance the technological arts.

In the present case, claims 1-3, 17, 18, and 20 only recite an abstract idea. The recited steps of merely receiving products and calculating which tank to send the products to based on a mathematical computation does not apply, involve, use, or advance the technological arts since all of the recited steps can be performed in the mind of the user or by use of a pencil and paper.

This is specifically noted in the specification of the current invention at paragraph 0036 and the claims do not claim a computer-automated method.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention decides on a tank in which to send the batch (i.e., useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention as a whole, is not within the technological arts as explained above, claims 1-3, 17, 18, and 20 is deemed to be directed to non-statutory subject matter.

Claims 1-3, 17, 18, and 21 also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by an asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

#### *Claim Rejections - 35 USC § 112*

5. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Specifically, claim 2 recites that the batch number associated with the batch to be processed is representative of the number of batches that have been processed since the liquid was last changed. This statement is wholly unrelated to the first claim which is a method for

identifying a tank comprising a liquid. Claim 2 does not further restrict the method as set forth in claim 1 and only modifies a variable which has no impact on the method of claim 1 as written.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,439,824 to Harris et al.

9. Referring to claim 1, 17, and 21, Harris shows a method for identifying a tank from a variety of tanks in which a batch of products is to be processed (Column 5 specifically).

10. Harris does not specifically show that this tank is selecting by identifying the batch number, finding the remainder when the batch number is divided by the number of tanks, and using that number tank.

11. While this calculation is not described in Harris, the use of the modulus decision system is a well-known and inherent concept in many everyday tasks, though never described as such. The simplest explanation is when there are only two possible tanks. Then taking the remainder of the batch number divided by the number of tanks (2) will always yield either zero or one. So when batch numbers are processed sequentially (there is no reason to believe that they are not processed sequentially in the Harris patent), it is simply an alternating between tanks. While only slightly more complicated with more tanks, the modulus system as described in the

specification and claimed is nothing more than a way of processing sequential batches of product in alternating processing chambers. A simple example with four tanks:

Batch #1 = processed in tank 1.

Batch #2 = processed in tank 2.

Batch #3 = processed in tank 3.

Batch #4 = processed in tank 4.

Batch #5 = processed in tank 1.

Batch #6 = processed in tank 2.

Batch #7 = processed in tank 3.

Batch #8 = processed in tank 4.

Batch #9 = processed in tank 1.

Batch #10 = processed in tank 2.

Batch #11 = processed in tank 3.

Batch #12 = processed in tank 4.

Batch #13= processed in tank 1. etc....

It would have been obvious to one of ordinary skill at the time the invention was made to use the modulus division system as well known in the art as a way to decide the destination tank of Harris because of the known mathematical theory of congruency (See cited prior art on modular arithmetic for a detailed explanation) which explains that when any two numbers leave the same remainder when divided by another number, they are said to be congruent (or

“equivalent”) to each other in that specific application. In this case, batch numbers which are congruent would be processed in the same tank.

Referring to claim 3 and 18, Harris shows processing the incoming products in the tank identified.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael D. Masinick whose telephone number is (571) 272-3746. The examiner can normally be reached on Mon-Fri, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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